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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/065,728

11/13/2002

Brock Osborn

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12/09/2005

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH
PATENT DOCKET RM. BLDG. K1-4A59
NISKAYUNA, NY 12309

EXAMINER

FERRIS III, FRED O

ART UNIT

PAPER NUMBER

2128

DATE MAILED: 12/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,728

Applicant(s)

OSBORN ET AL.

Examiner

Fred Ferris

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/13/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. *Claims 1-21 have been presented for examination based on applicant's disclosure filed 13 November 2002. Claims 1-21 stand rejected by the examiner.*

Drawings

2. *Applicant's drawings submitted on 13 November 2002 have been approved by the examiner.*

Preamble of the Claims

3. *The preambles of independent claims 1, 9, 13, and 19 as presented for examination, have not been given patentable weight. Appropriate weight is given to limitations recited in the body of the claim that are needed for purpose of antecedence. "A mere statement of purpose or intended use in the preamble of a claim need not be considered in finding anticipation; however, it must be considered if the language of a preamble is necessary to give meaning to the claim" Diversitech Corp. v. Century Steps, Inc., 7 USPQ2d 1315 (Fed. Cir. 1988); In re Stencel, 4 USPQ2d 1071 (Fed. Cir. 1987)*

Claims Interpretation

4. *Applicants are disclosing a method and system for analyzing the performance of a system inclusive of a system statistical associate (SSA) for collecting data relating to operating system variables affecting the performance of the system and generating a report. Based on applicants disclosure, the examiner has interpreted the term "system*

statistical associate (SSA)" to simply be a sensor module with a data processor and communications channel used for monitoring equipment performance parameters (such as temperature) and generating a data report. The examiner notes that these broadly claimed SSA elements included in independent claims 1, 9, 13, and 19 are generally standard features available in commercially available control monitoring equipment from vendors such as Esensor, TeleMonitor, or National Instruments. These modules are known in the industry as "smart transducers" or "NCAP modules" and defined as standard networked sensor modules in IEEE Standard 1451.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. *Claims 2-6 and 13-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, independent claim 13 and claim 2 recite deriving a "system model based on data profiles" but the specification gives no clear and concise indication as to how the recited system is actually "modeled" by the data profiles. The specification's reference to a productivity model, lifetime model, and efficiency model (para:0022) does not cure this deficiency since no actual "models" are disclosed in the*

specification. Dependent claims inherit the defects of the claims from which they depend.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. *Claims 1, 9, 13, 19 and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by “IEEE-P1451 Network Capable Application Processor Information Model”, J. Warrior, IEEE-P1451.1 Working Group, IEEE 1996.*

Regarding claims 1, 9, 13, 19 and 21: Warrior teaches a method and system for analyzing system performance via a smart module (NCAP: SSA equivalent) inclusive of capabilities for collecting data on system operating variables (Figs. 1, 2, Sec. 5.0-7.3), discerning data parameters affecting system performance (Figs. 2, 3, Sec. 4.0-8.4.2.2) from the data, and generating a report (data log) on the parameters via embedded sensors (Sec. Fig. 3, 7.4-8.1) monitoring device parameters, a data processor (Fig. 1, Sec. 2.0) capable of affecting monitored device performance, and a data parameter transmitter (Sec. 7.4-8.1).

7. Claims 1, 9, 13, 19, and 21 are also rejected under 35 U.S.C. 102(b) as being clearly anticipated by “IEEE Std 1451.1-1999”, IEEE-SA Standards Board, June 1999.

Regarding claims 1, 9, 13, 19 and 21: IEEE Std 1451.1-1999 teaches a method and system for analyzing system performance via a smart module (NCAP: SSA equivalent) inclusive of capabilities for collecting data on system operating variables (Fig. 1, pp. iv), discerning data parameters affecting system performance (Figs. 1, Into.) from the data, and generating a report (data log) on the parameters via embedded sensors (Fig. 1, pp. ii-iv) monitoring device parameters, a data processor (Fig. 1, pp. ii-iv) capable of affecting monitored device performance, and a data parameter transmitter (Fig. 1, pp. iv).

8. Claims 1, 9, 13, 19, and 21 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US Patent 6,539,267 issued to Eryurek et al.

Regarding claims 1, 9, 13, 19, and 21: Eryurek teaches a method and system for analyzing system performance via a smart module (SSA equivalent) inclusive of capabilities for collecting data on system operating variables (Abstract, Figs. 1, 2), discerning data parameters affecting system performance (CL1_L50-CL2_L9) from the data, and generating a report (data log) on the parameters via embedded sensors (Figs. 1, 2, Abstract, CL2_L30-, CL3_35) monitoring device parameters, a data processor (Figs. 1, 2, Abstract) capable of affecting monitored device performance, and a data parameter transmitter (Figs. 1, 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 2-8, 10-12, 14-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over “IEEE-P1451 Network Capable Application Processor Information Model”, J. Warrior, IEEE-P1451.1 Working Group, IEEE 1996 in view of US Patent 6,847,854 issued to Dicenzo.

As previously cited above, Warrior renders obvious method and system elements of claims 1, 9, 13, 19, and 21 relating to analyzing system performance via a smart module (NCAP: SSA equivalent) inclusive of capabilities for collecting data on system operating variables (Figs. 1, 2, Sec. 5.0-7.3), discerning data parameters affecting system performance (Figs. 2, 3, Sec. 4.0-8.4.2.2) from the data, and generating a report (data log) on the parameters via embedded sensors (Sec. Fig. 3, 7.4-8.1) monitoring

device parameters, a data processor (Fig. 1, Sec. 2.0) capable of affecting monitored device performance, and a data parameter transmitter (Sec. 7.4-8.1).

Warrior does not explicitly disclose the elements relating to generating, communicating, and correlating a data profile of parameters, a lifetime model, or that operating variables include parameters such as temperature, load, humidity, and vibration.

Per claims 2-6, 8, 10, 11, 14-16, and 20: *Discenzo teaches collecting data on system operating variables (CL9_L39-46) which affect system performance and reliability by discerning data parameters affecting system performance (CL10_L26-53) data, generating a report (CL31_L18-19, i.e. status) on the parameters via embedded sensors (Figs. 9-11, 18, CL5_L60-67) monitoring device parameters, a data processor (Figs. 6, 7, CL24_L21-45) capable of affecting monitored device performance, and a data parameter transmitter (CL30_L3-19, CL31_L63-CL32_L39, CL34_L41-CL6_65, Figs. 15-19). More importantly Discenzo further teaches the use of a life expectancy models (CL15_L60, i.e. a lifetime model), generating and communicating a resulting data profile (CL16_16, Figs. 2, 12-15) and correlating the representative profiles and parameter (CL26_L52-55, CL29_54-57, CL30_L3-19))*

Per claims 7, 12, 17, and 18: *Discenzo further discloses that the sensors detect operating variables including parameters such as temperature, load, humidity, and vibration (CL38_L59-63, CL39_53-61) and optimizing (automatically changing) parameters to improve performance (CL5_L25-29, CL9_L17-45, CL39_53-CL40_18, especially CL40_L11-13).*

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings of Warrior relating to analyzing system performance via a smart module (SSA equivalent), with the teachings of Discenzo relating to life expectancy models, and generating, communicating, and correlating representative data profiles, to realize the elements of the claimed invention. An obvious motivation exists since, as referenced in the prior art, the use of intelligent (smart) sensor technology improves the diagnostic and optimization process associated with enhanced system reliability. (See: Discenzo, CL9_L39-45, CL12_L11). Accordingly, a skilled artisan tasked with realizing a system and method for analyzing and optimizing the performance of a monitored system, and having access to the teachings of Warrior and Discenzo, would have knowingly modified the teachings of Warrior with the teachings of Discenzo (or visa versa) to realize the claimed elements of the present invention.

Conclusion

10. *The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.*

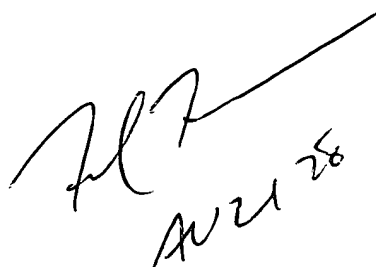
US Patent Application Publication issued to Schleiss et al teaches monitoring and optimizing system performance using smart sensors.

US Patent 6,032,109 issued to Ritmiller teaches monitoring and optimizing system performance using smart sensors.

US Patent 6,219,597 issued to Longere teaches monitoring and optimizing system performance using smart sensors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached at 571-272-2279. The Official Fax Number is: (703) 872-9306

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